

Application No. 09/620,331

CLAIMS:

1. (withdrawn) A volume-adjusting insert for a sample vessel, the insert comprising:
a top end and a bottom end, the top end comprising a septum seal penetrable by a deposit/extraction element;
a through-chamber extending from the septum seal of the top end to the bottom end; and
a seal surface disposed on an outside surface of the insert, the seal surface sealing an inside surface of the sample vessel when inserted into the sample well, the seal surface defining a vessel chamber disposed in a lower portion of the sample vessel, the vessel chamber in communication with the through-chamber of the insert.
2. (withdrawn) The volume-adjusting insert of claim 1 wherein the septum seal comprises a material of predetermined resiliency to provide sufficient frictional engagement with the deposit/extraction device when inserted to allow positioning of the insert with the sample deposit/extraction device.
3. (withdrawn) The volume-adjusting insert of claim 1 comprising a body sealed at an upper end by a removable cap, the body comprising the through-chamber and the cap comprising the septum seal.
4. (withdrawn) The volume-adjusting insert of claim 1 wherein the seal surface of the insert comprises a predetermined outer diameter to seal the inside surface of the sample vessel.
5. (withdrawn) The volume-adjusting insert of claim 1 comprising a bottom seal surface at the bottom end for sealing against a sample processing element in the sample vessel.
6. (withdrawn) The volume-adjusting insert of claim 3 wherein the body comprises a lower portion comprising an expansion chamber.

Application No. 09/620,331

7. (withdrawn) The volume-adjusting insert of claim 3 wherein the body comprises a generally cone-shaped needle guide between the top end and the bottom end.
8. (withdrawn) The volume-adjusting insert of claim 3 wherein the removable cap is a crimp cap.
9. (withdrawn) The volume-adjusting insert of claim 3 wherein the removable cap is a snap cap.
10. (currently amended) A method of testing samples, the method comprising the steps: inserting a volume-adjusting insert into a sample vessel comprising a bottom opening for communication of a sample fluid, the volume-adjusting insert comprising a top and a bottom defining an axial direction, a septum seal in an upper portion of the insert, a
5 reduced-diameter portion having a close fit with an outside diameter of a penetrating sample deposit/extraction device element ~~and communicating with a bottom end of the insert between the septum seal and the bottom end of the insert~~, a conical guide disposed between the septum seal and the reduced diameter portion, and a seal surface on an outer surface of the insert for sealing an inside seal surface of the sample vessel, the seal
10 ~~surface of the insert, reduced-diameter portion, and~~ defining a fluid path with a bottom portion of the vessel ~~defining a reduced volume sample chamber as compared to the sample vessel alone~~ below the seal surface;
positioning a penetrating sample deposit/extraction element above the insert;
inserting the penetrating sample deposit/extraction element through the septum seal, the
15 conical guide, and into the reduced-diameter portion to a depth sufficient to provide axial alignment of the insert and the sample deposit/extraction element; and
transferring a the sample fluid between the sample deposit/extraction element and the ~~reduced volume sample chamber~~ bottom opening.
11. (previously presented) The method of testing samples of claim 10 wherein the steps of positioning a penetrating sample deposit/extraction element above the insert and

Application No. 09/620,331

inserting the penetrating sample deposit/extraction element through the septum seal, the conical guide, and into the reduced-diameter portion is performed before the step of inserting a volume-adjusting insert into a sample vessel so that positioning the insert for insertion into the vessel is performed with the sample deposit/extraction element through frictional engagement of the sample deposit/extraction element and the septum seal.

12. (currently amended) The method of testing samples of claim 10 wherein the bottom opening comprises an extended portion having a reduced diameter as compared to the sample vessel at a beginning of the bottom opening and comprising the additional step of utilizing hydraulic pressure generated by the penetrating sample deposit/extraction element to transport the sample fluid through the insert and out of a bottom-extraction opening the extended portion of the sample vessel.

13. (currently amended) The method of testing samples of claim 12 comprising the additional step of passing the sample fluid through a processing element disposed between the reduced diameter portion and the ~~bottom-extraction opening~~ extended portion of the sample vessel.

14. (withdrawn) A volume-adjusting insert for reducing the sample volume of a bottom-extraction sample vessel, the insert comprising:
a top end and a bottom end, the top end comprising a septum seal penetrable by a deposit/extraction element;
a through-chamber extending from the septum seal of the top end to the bottom end; and
a seal surface disposed on an outside surface of the insert, the seal surface of predetermined dimensions to seal an inside surface of the sample vessel when inserted into the sample well, the seal surface defining a reduced-volume vessel chamber disposed in a lower portion of the sample vessel, the reduced volume vessel chamber in communication with the through-chamber of the insert and a bottom extraction opening of the bottom-extraction sample vessel.

Application No. 09/620,331

15. (withdrawn) The volume-adjusting insert of claim 14 wherein the through-chamber is axially aligned with the septum seal so that the through-chamber acts as an alignment element to align the insert with the deposit/extraction element when inserted into the through-chamber.
16. (withdrawn) The volume-adjusting insert of claim 14 wherein the septum seal comprises a material of predetermined resiliency to provide sufficient frictional engagement with the deposit/extraction element when inserted to allow positioning of the insert with the sample deposit/extraction element.
17. (currently amended) The method of testing samples of claim ~~10~~ 12 wherein the sample vessel is one of a plurality of wells in a tray.
18. (currently amended) The method of testing samples of claim 17 wherein each of said plurality of wells in a tray comprises ~~a bottom extraction opening~~ an extended portion.
19. (currently amended) The method of testing samples of claim 10 comprising the additional step of ~~withdrawing the insert from the vessel and positioning~~ repositioning the insert to another processing location after the step of transferring the sample fluid between the sample deposit/extraction element and the bottom opening by frictional engagement of the sample deposit/extraction element and the septum seal.
20. (previously presented) The method of claim 19 wherein said another processing location is another vessel.
21. (currently amended) A method of testing samples, the method comprising the steps: inserting a processing device into a sample vessel comprising a bottom opening for communication of a sample fluid, the processing device comprising a first septum seal in an upper portion of the device, a an elongated reduced-diameter portion defining an axial direction of the device, having a close fit with an outside diameter of a penetrating sample

Application No. 09/620,331

deposit/extraction device and disposed between the first septum seal and a bottom end, and a conical guide disposed between the first septum seal and the reduced-diameter portion, the reduced-diameter portion defining a fluid path with a bottom portion of the vessel;

positioning a penetrating sample deposit/extraction element above the first septum seal of the processing device;

inserting the penetrating sample deposit/extraction element through the first septum seal, the conical guide, and into the reduced-diameter portion to a depth sufficient to provide axial alignment of the sample deposit/extraction element and the device;

transferring a the sample fluid between the sample deposit/extraction element and the bottom opening of the vessel; and

moving the device to another processing location by frictional engagement between the sample deposit/extraction element and the first septum seal.

22. (currently amended) The method of claim 21 wherein a processing element is disposed in a the bottom portion of the ~~device~~ vessel, and the sample fluid is transferred through the processing element by the sample deposit/extraction element.

23. (previously presented) The method of claim 22 wherein the processing element is an adsorbent element.

24. (previously presented) The method of claim 22 wherein the processing element is an absorbent element.

25. (previously presented) The method of claim 22 wherein the processing element is a filter.

26. (currently amended) The method of testing samples of claim 21 wherein the steps of positioning a penetrating sample deposit/extraction element above the first septum seal of the processing device and inserting the penetrating sample deposit/extraction element

Application No. 09/620,331

through the first septum seal, the conical guide, and into the reduced-diameter portion is performed before the step of inserting a processing device into a sample vessel so that positioning the device for insertion into the vessel is performed with the sample deposit/extraction element through frictional engagement of the sample deposit/extraction element and the first septum seal.

27. (currently amended) The method of claim 21 comprising the additional step of withdrawing the device out of the sample vessel by frictional engagement of the sample deposit/extraction element and the first septum seal after the step of inserting the penetrating sample deposit/extraction element through the first septum seal, the conical guide, and into the reduced-diameter portion.

28. (cancelled)

29. (currently amended) The method of claim 26 comprising the additional step of withdrawing the device from the sample vessel and moving to a different processing location through frictional engagement of the sample deposit/extraction element and the first septum seal, is performed after the step of transferring a sample fluid between the sample deposit/extraction element and the bottom opening of the vessel.

30. (previously presented) The method of claim 29 wherein the moving to a different processing location comprises the additional step of inserting the device in a second sample vessel.

31. (currently amended) The method of claim 21 wherein the device further comprises a ~~first septum seal and~~ a second septum seal in a the bottom ~~portion~~ end of the device and comprising the additional step of inserting the sample deposit/extraction element through the second septum seal after inserting a the penetrating sample deposit/extraction element through the first septum seal, the conical guide, and into the reduced-diameter portion.

Application No. 09/620,331

32. (previously presented) The method of claim 21 wherein the sample vessel is one of a plurality of wells in a tray.